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— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

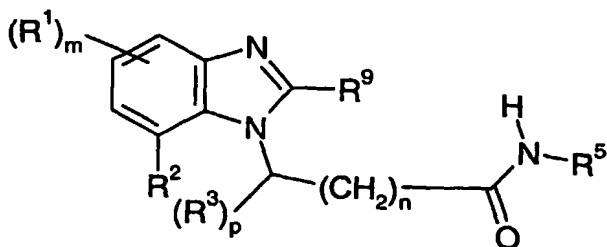
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(54) Title: **NEW BENZIMIDAZOLE DERIVATIVES**



(I)

(57) Abstract: The present invention relates to new compounds of formula (I) wherein R¹ to R⁹ are as defined as in formula I, or salts, solvates or solvated salts thereof, processes for their preparation and to new intermediates used in the preparation thereof, pharmaceutical formulations containing said compounds and to the use of said compounds in therapy.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE 2004/000738

A. CLASSIFICATION OF SUBJECT MATTER		
IPC7: C07D 235/08, C07D 235/30, A61K 31/502, A61P 29/00 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
IPC7: C07D, A61K, A61P		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
SE,DK,FI,NO classes as above		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
CHEM.ABS.DATA, WPI DATA, EPO-INTERNAL		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 2004000828 A1 (BIOVITRUM AB), 31 December 2003 (31.12.2003), Formula I --	1-21
X	B. Vijaya Kumar, V Malla Reddy, "Cyanoethylation of Benzimidazoles: Synthesis & Biological Activities of Some New -(-Beta-Cyanoethyl)benzimidazoles & Their Derivatives", Indian Journal of Chemistry, Vol. 24B, October 1985, pages 1098-1101, table I, scheme 1 --	1-21
X	EP 0419210 A1 (PFIZER INC.), 27 March 1991 (27.03.1991), Formula I --	1-21
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 4 November 2004		Date of mailing of the international search report 11-11-2004
Name and mailing address of the ISA/ Swedish Patent Office Box 5055, S-102 42 STOCKHOLM Facsimile No. +46 8 666 02 86		Authorized officer Fernando Farieta/BS Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE 2004/000738

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 0196336 A2 (WARNER-LAMBERT COMPANY), 20 December 2001 (20.12.2001), claim 20 --	1-21
A	GB 1186504 A (FISONS PEST CONTROL LIMITED), 2 April 1970 (02.04.1970), Formula I --	1-21
A	EP 0149200 A1 (DR. KARL THOMAE GMBH), 24 July 1985 (24.07.1985), Formula I --	1-21
E	US 6794404 B2 (BEAULIEU ET AL), 21 Sept 2004 (21.09.2004), Formula I --	1-21
A	WO 9422859 A1 (BAYER AKTIENGESELLSCHAFT), 13 October 1994 (13.10.1994), Formula I --	1-21
A	WO 02100822 A1 (BIOVITRUM AB), 19 December 2002 (19.12.2002), Formula I --	1-21
A	WO 0185722 A1 (COR THERAPEUTICS, INC.), 15 November 2001 (15.11.2001), Formula I -- -----	1-21

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: **18**
because they relate to subject matter not required to be searched by this Authority, namely:
see extra sheet
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see extra sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.: **1-18, 21 and part of 19-20**
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

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Box II.1

Claim 18 relates to a method for the treatment of the human or animal body by surgery or therapy, as well as diagnostic methods. Such a method, according to 1 § PL, third paragraph, cannot be given patent protection. Nevertheless, a search has been executed for this claim. The search has been based on the alleged effects of the compounds or compositions.

Box III

Lack of unity

The International Search Authority considers that there are 3 inventions covered by the claims indicated as follows:

I: Claims: 1-18, 21 and part of claims 19-20 directed to benzimidazoles.

II: Part of claims 19-20 directed to phenyl compounds.

III: Claim 22 directed to indol compounds.

The ISA has carried out a partial search which relates to invention I mentioned above.

The present application has been considered to contain III inventions which are not linked such that they form a single general inventive concept, as required by Rules 13.1, 13.2 and 13.3 PCT.

Further the claims 19-20 only seems to comprise use of compounds as intermediates for the compounds of claim 1, several compounds are not considered to be in the scope of formula I of the application.

Consequently, the three groups of inventions are not so linked as to form a single general inventive concept as required by Rule 13.1 PCT.

Invention 1 has been searched to the extend it was possible. The novelty search has showed that there are a large number of compounds relevant to the issue of novelty of the present invention and it has not been possible to provide references to all of these compounds. Therefore a limited number of representative compounds have been selected. The selection is based on the compounds which resemble the compounds of claim 8 to the greatest extent and compounds which have a medical use, preferably with the same effect as the claimed compounds.

INTERNATIONAL SEARCH REPORT

Information on patent family members

01/10/2004

International application No.

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INTERNATIONAL SEARCH REPORT

Information on patent family members

01/10/2004

International application No.

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